GPM Level 3 PRPS (Version 05)

Description:

The GPM Level 3 Precipitation Retrieval and Profiling Scheme (PRPS) product provides global 0.25 degree x 0.25 degree gridded monthly and daily unconditional surface precipitation means, pixel counts and other related parameters from the GPM Level 2 Precipitation Retrieval and Profiling Scheme (PRPS) product.

Monthly product filename starts with 3A-MO and daily product starts with 3A-DAY. For example,

3A-MO.MT1.SAPHIR.GRIDPRPSv1.20161201-S000000-E235959.12.V05A.HDF5

3A-DAY.MT1.SAPHIR.GRIDPRPSv1.20161201-S000000-E235959.336.V05A.HDF5

Because this product is an summary of the Level 2 PRPS retrieval product, much more information is available via the GPM Precipitation Retrieval and Profiling Scheme (PRPS) - SAPHIR and GPM file specification documents.

Product Content:

nlat=720 Number of 0.25 degree grid intervals of latitude from 90S to 90N.

nlon=1440 Number of 0.25 degree grid intervals of longitude from 180W to 180E.

npixTotal (4-byte integer, array size: nlat x nlon):

The total number of pixels with surfacePrecipitation >= 0 for each grid box.

npixPrecipitation (4-byte integer, array size: nlat x nlon):

The total number of pixels with surfacePrecipitation > 0 for each grid box.

surfacePrecipitation (4-byte float, array size: nlat x nlon, unit: mm/hr):

The mean of the instantaneous precipitation rate at the surface for each grid box.

totalPrecip = sum of surface precipitation

surfacePrecipitation = totalPrecip /npixTotal

error (4-byte float, array size: nlat x nlon, unit: mm/hr):

The mean of the L2 error values for each grid box.

sumError = sum of error

error = sumError /npixTotal

fit (4-byte float, array size: nlat x nlon, unit: K):

The mean of the L2 fit values for each grid box.

sumFit = sum of fit

fit = sumFit/npixTotal

dataQuality (4-byte float, array size: nlat x nlon, unit: %):

The percent of pixels with qualityFlag=0 (indicates good data). Values range from 0 to 100 percent. A value of 100 means all pixels in the grid box are good.

TotalPixelCount = total number of pixels with qualityFlag>=0

totalQuality0 = total number of pixels with qualityFlag=0

dataQuality = 100.0 * totalQuality0/totalPixelCount

References:

1. PPS/Global Precipitation Measurement File Specification for GPM Products.

2. GPM Level 2 PRPS Algorithm Theoretical Basis Document (ATBD).

Contact:

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